

Numbness may hold clue to poor foot care, says APERF grant winner

People with numb feet (peripheral neuropathy) are less likely to look after them well because they can't feel pain.

Or so Byron Perrin thinks.

The Group Discipline Senior Podiatrist at Bendigo Health in central Victoria is about to test this theory a little more after winning a \$3980 Australian Podiatry Education and Research Foundation (APERF) grant.

The grant was one of four awarded nationally by APERF. Two went to Victorian based podiatrists.

Byron, a Masters graduate and PhD candidate at Bendigo's La Trobe University campus, will use the grant to fund a two-year study that will examine how the beliefs and misperceptions about numb feet of those with diabetes affects the development of foot problems.

"Even though we understand the pathophysiological causes of diabetes-related foot problems, we are not really making a great impact on their incidence or occurrence," he says.

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"It is becoming increasingly clear that the management of this health problem must take into account psychological and behavioural factors. If we understood more about how the diabetes sufferer interprets their foot health, then more effective educational interventions may be developed to prevent complications such as ulcerations and, ultimately, lower limb amputations. The results of this study will help confirm or reject the hypothesis that in people at risk of diabetes-related foot complications, foot-specific personal belief systems influence behaviour and can help predict foot health prognosis."

The study is expected to add to a growing international body of work on this topic. In December 2006 a team of US and European scientists published a paper in *Diabetes Care* outlining their studies which showed that patients with neuropathy or loss of sensation in the feet who did not take good care of their feet often had misperceptions about their conditions.



Bendigo podiatrist, Byron Perrin will investigate if peripheral neuropathy is affecting how and if people look after their feet with his grant from the Australian Podiatry Education and Research Foundation (APERF).

The scientists developed a scale to assess how patients interpret neuropathy, respond emotionally and make decisions to engage in foot self-care.

One aspect of the scale, for example, looked at illness emotions and found that worry helps people adhere to good foot care while anger hinders good foot care.

Knowing how people make decisions to engage in good foot care is expected to become vital as a world epidemic of Type 2 diabetes spreads. The incidence of Type 2 diabetes is expected to rise most rapidly in Africa, Asia and South America, where foot ulcers are more likely to occur as a result of numb feet and associated poor foot care.

Scientists say the lifetime risk of a person with diabetes developing a foot ulcer could be as high as 25 per cent and it's believed that every 30 seconds, worldwide, a lower limb is amputated as a consequence of diabetes.

"It's a significant problem and it's going to get worse," Byron says. "The Diabetes Care study highlighted misperceptions

seen in many clinics such as believing that foot problems are primarily caused by poor circulation and that pain will precede a foot problem. If people have an incorrect perception of their condition, they are less likely to undertake advised preventative behaviours."

Byron's study will include 150 people with diabetes and peripheral neuropathy who attend Bendigo Health's Diabetic Foot Clinic.

"At the end of the two years, we will look at who out of these people developed foot problems such as ulceration, infection and Charcot arthropathy and who did not. The results may support the use of the scales developed by the US and European scientists to screen people with neuropathy to determine who may be more likely to behave poorly towards their feet and why that is so."

Byron also wants to use the Footcare Confidence scale which he developed as part of his Masters degree to investigate how confident people are in undertaking foot care. ●